

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) A composition for enhancing the production of IFN α in an animal comprising:
 - (a) a liposome;
 - (b) at least one A-type CpG;wherein all nucleotides of the A-type CpG oligonucleotide (b) are phosphodiester nucleotides, and further wherein said A-type CpG (b) is bound to said liposome (a)[;].
2. (Currently Amended) The composition of claim 1, wherein said at least one A-type CpG comprises ~~at least one CpG motif, wherein the nucleotides of said at least one CpG motif are composed of phosphodiester nucleotides~~ poly G motifs at the 5' and 3' ends.
3. (Currently Amended) The composition of ~~any one of claims 1 or 2~~ claim 2, wherein said at least one A-type CpG comprises poly G motifs at the 5' and 3' ends, ~~preferably wherein said G nucleotides~~ the G nucleotides of said poly G motifs are phosphodiester nucleotides.
4. (Currently Amended) The composition of ~~any one of the preceding claims~~ claim 1, wherein said at least one A-type CpG comprises the sequence 5' R₁Y₁-CG-R₂Y₂ 3', and wherein R₁, R₂, Y₁, and Y₂ are any nucleotide.
5. (Currently Amended) The composition of ~~any one of claims 1 to 3~~ claim 1, wherein said at least one A-type CpG comprises the sequence 5' R₁Y₁ CG R₂Y₂ 3'

or 5' R₁Y₁CG Y₂ R₂ 3', ~~or preferably 5' R₁R₂CG R₃Y₁CG Y₂Y₃ 3'~~ and wherein R₁, R₂, or R₃ is A or G, and Y₁, Y₂, or Y₃ is C or T.

6. (Currently Amended) The composition of ~~any one of the preceding claims~~ claim 5, wherein said at least one A-type CpG comprises the sequence 5' R₁R₂CG R₃Y₁CG Y₂Y₃ 3' ~~20 to 300 nucleotides, preferably 20 to 100 nucleotides, and even more preferably 20 to 40 nucleotides.~~
7. (Currently Amended) The composition of ~~any one of the preceding claims~~ claim 1, wherein said A-type CpG[,] is selected from:
 - (a) a recombinant oligonucleotide;
 - (b) a genomic oligonucleotide;
 - (c) a synthetic oligonucleotide;
 - (d) a plasmid-derived oligonucleotide;
 - (e) a PCR product;
 - (f) a single-stranded oligonucleotide; and
 - (g) a double-stranded oligonucleotide.
8. (Currently Amended) The composition of ~~any one of the preceding claims~~ claim 1, wherein said at least one A-type CpG comprises, ~~or alternatively consists essentially of, or alternatively consists of~~ a palindromic sequence.[.]
9. (Currently Amended) The composition of claim 8, wherein said palindromic sequence ~~comprises, or alternatively consists essentially of, or alternatively consists of~~ GACGATCGTC (SEQ ID NO: 16).
10. (Currently Amended) The composition of claim 9, wherein said palindromic sequence is flanked at its 5'-terminus by at least 3 and at most 10 guanosine entities and wherein said palindromic sequence is flanked at its 3'-terminus by at least 6 and at most 10 guanosine entities.[.]

11. (Currently Amended) The composition of claim 10, wherein said A-type CpG has a nucleic acid sequence selected from:
 - (a) GGGGACGATCGTCGGGGGG (SEQ ID NO: 6);
 - (b) GGGGGACGATCGTCGGGGGG (SEQ ID NO: 7);
 - (c) GGGGGGACGATCGTCGGGGGG (SEQ ID NO: 8);
 - (d) GGGGGGGACGATCGTCGGGGGG (SEQ ID NO: 9);
 - (e) GGGGGGGGACGATCGTCGGGGGGG (SEQ ID NO:10);
 - (f) GGGGGGGGGACGATCGTCGGGGGGGG (SEQ ID NO: 11);
 - (g) GGGGGGGGGGACGATCGTCGGGGGGGGG (SEQ ID NO: 12);
 - (h) GGGGGGCGACGACGATCGTCGTCGGGGGGG (SEQ ID NO: 5); and
 - (i) GGGGGGGGGGGACGATCGTCGGGGGGGGGG (SEQ ID NO: 3).
12. (Original) The composition of claim 9, wherein said at least one A-type CpG has a nucleic acid sequence of SEQ ID NO: 3.
13. (Currently Amended) The composition of ~~any one of the preceding claims~~ claim 1, wherein said liposome is selected from the group consisting of:
 - (a) neutral;
 - (b) anionic;
 - (c) cationic;
 - (d) stealth; and
 - (e) cationic stealth.
14. (Currently Amended) The composition of ~~any one of the preceding claims~~ claim 1, wherein said liposome is a cationic liposome.
15. (Currently Amended) A method for enhancing the production of IFN α in an animal, said method comprising introducing into said animal a the composition of ~~any one of the preceding claims~~ claim 1.

16. (Cancelled)

17. (Currently Amended) The method of ~~any one of claims 15 to 16~~ claim 13, wherein said composition is introduced into said animal subcutaneously, intramuscularly, intravenously, intranasally, directly into the lymph node or locally into, onto or close to a tumor.

18-22. (Cancelled)

23. (New) The composition of claim 1, wherein said A-type CpG comprises 20 to 300 nucleotides.

24. (New) The composition of claim 23, wherein said A-type CpG comprises 20 to 100 nucleotides.

25. (New) The composition of claim 24, wherein said A-type CpG comprises 20 to 40 nucleotides.

26. (New) A method of treatment of a disorder or disease in an animal, wherein said disorder or disease is selected from the group consisting of cancer and infectious diseases, the method comprising introducing the composition of claim 1 into said animal.